REMARKS

Claims 1-52 are pending in the Application. Claims 5, 14, and 36 were objected to in the Office Action mailed March 4, 2008, and claims 1-52 were rejected. Claims 1, 2, 5-8, 11, 12, 14, 20, 25, 26, 28-30, 33, 34, 36, 41, 46, 47, and 49 are amended by the present response. Claims 1, 6, 28, and 49 are independent claims, while claims 2-5, 7-27, 29-48, and 50-52 depend either directly or indirectly from independent claims 1, 6, 28, and 49, respectively.

The Applicant respectfully requests reconsideration of claims 1-52, in light of the following remarks.

Objections to Claims

Claims 5, 14, and 36 were objected for the use of acronyms (such as CRC and MP3) which were not spelled out once in the claims. Those claims are amended by the present response to spell out those acronyms. Therefore, Applicants respectfully request that the objection to claims 5, 14, and 46 be withdrawn.

Rejection of Claims Under 35 U.S.C. §112

Claims 6-27, 30-31, and 46-47 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 was rejected for reciting the limitation "the update agent." Claims 7-27 depend from claim 6 and were rejected for the same reason. The Office Action asserted there was insufficient antecedent basis. Claim 6 is amended in the present response to recite "an update agent." Applicant respectfully submit that claim 6, along with the claims that depend from claim 6, are allowable under 35 U.S.C. §112.

The Office Action stated that claims 8 and 30 were rejected because they "cite the limitations about one flash memory chip further comprising a plurality of flash

memory chips." The Office Action further stated, "[i]t is not clear what the difference about these chips and how one chip comprises a plurality of chips." Further, the Office Action stated the limitations were read as "one flash memory comprises a plurality of memory sections." Applicant respectfully traverses the rejection, and further respectfully submits the Office Action's reading of the limitation was incorrect. Moreover, Applicant believes the interpretation employed by the Office Action helped result in rejections based on prior art which the Applicant also respectfully traverses, as discussed in more detail below.

Claim 8, as originally submitted, recited "[t]he method according to claim 7, wherein <u>the at least one FLASH memory chip further comprises a plurality </u>of FLASH memory chips..." (emphasis added). Claim 30, as originally submitted, recited "[t]he network according to claim 28, wherein the <u>at least one memory device further comprises a plurality</u> of memory device..." Thus, for example, claim 8 did not recite "one flash memory chip further comprising a plurality of flash memory chips" as asserted in the Office Action, but instead recited wherein at least one FLASH memory chip (i.e. one or more) comprised a plurality of FLASH memory chips (i.e. more than one). Applicant thus respectfully submits that the claim language of originally submitted claims 8 and 30 was not indefinite, and, further, that Office Action's understanding of the claim language as "one flash memory comprises a plurality of memory sections" was not the appropriate reading. In any event, as discussed below, claims 8 and 30 are amended by the present response, rendering the indefiniteness objection moot. Because claims 9 and 10, and 31, were rejected as being dependent on claims 8 and 30, respectively, Applicant submits that their rejection as indefinite is also moot.

Claims 25, 26, and 46 were rejected, according to the Office Action, because they "recite at least one processor comprises a plurality of processor and the at least one memory device comprises a plurality of memory devices." The Office Action asserted that "it is not clear how the 'one processor' can comprise a plurality of processors." Applicant respectfully traverses this rejection. For example, the claims do not recite that just one processor comprises a plurality of processors, but instead recite

that "the at least one processor comprises a plurality of processors." Thus, for example, claim 25 does not recite one processor comprising a plurality of processors, but rather recites wherein that at least one processor (i.e. one or more) comprises a plurality of processors (i.e. more than one). Applicant therefore respectfully submits that the claim language of claims 25, 26, and 46 are not indefinite. Further, claim 47 was rejected as being dependent on claim 46, and applicant respectfully submits that claim 47 is not indefinite therefore for the same reasons.

Rejection of Claims Under 35 U.S.C. §102(a)

Claims 6-9 and 11-24 were rejected under 35 U.S.C. §102(a) as being anticipated by Patrick J. O'Neil, WO 02/41147 A1 (hereinafter "O'Neil"). Claim 6 is an independent claim. Claims 7-9 and 11-24 depend from claim 6.

Claim 6 is amended by the present response to include, *inter alia*, a method of updating non-volatile memory, the non-volatile memory comprising a plurality of memory devices comprising a first memory device having a first associated type and a second memory device having a second associated type, wherein the first associated type and second associated type are not the same, the method comprising, *inter alia*, employing an update agent to interact with a memory library and the plurality of memory devices and to identify updating software corresponding to at least an associated type of at least one of the plurality of memory devices.

Applicant respectfully submits that because O'Neil does not disclose each element of claim 6 (and it dependent claims), that O'Neil does not anticipate those claims. For example, claim 6 relates to a method of updating non-volatile memory comprising a plurality of memory devices. The method of claim 6 further comprises, *inter alia*, employing an update agent to interact with a memory library and the plurality of memory devices and to identify updating software corresponding to at least an associated type of at least one of the plurality of memory devices. Applicant submits

that O'Neil does not disclose a plurality of memory devices comprising a first memory device having a first associated type and a second memory device having a second associated type, wherein the first associated type and second associated type are not the same, let alone a method comprising employing an update agent to interact with a memory library and the plurality of memory devices. In connection with claim 8, the Office Action asserted that O'Neil disclosed "wherein that at least one FLASH memory chip further comprises a plurality of FLASH memory chips." However, the Office Action also asserted, in connection with its indefiniteness rejection of claim 8, that claim 8 was being interpreted as "one flash memory comprises a plurality of memory sections." Applicants respectfully submit that O'Neil does not disclose, *inter alia*, a method of updating non-volatile memory, the non-volatile memory comprising a plurality of memory devices comprising a first memory device having a first associated type and a second memory device having a second associated type, wherein the first associated type and second associated type are not the same, as required by claim 6.

Further, amended claim 6 also requires, *inter alia*, employing an update agent to interact with a memory library and the plurality of memory devices and to identify updating software corresponding to at least an associated type of at least one of the plurality of memory devices. In connection with its obviousness rejection of claim 1, the Office Action recognized that "O'Neil does not explicitly disclose identifying the associated type of the memory devices." Thus, Applicant submits that O'Neil does not disclose claim 6's requirement of employing an update agent to interact with a memory library and the plurality of memory devices and to identify updating software corresponding to at least an associated type of at least one of the plurality of memory devices, and cannot anticipate claim 6 (or its dependent claims). As will be discussed in more detail below in connection with claim 1, Applicant further submits that claim 6, and its dependent claims, are not obvious as well.

Because claims 7-9 and 11-24 depend from claim 6, Applicant respectfully submits that O'Neil cannot anticipate them either. With further specific regard to, for example, claim 8, the Office Action stated, "[t]he flash memory/chips showed in the

Figures above have to be fabricated by the same or different manufacturer." In addition to the discussion above in connection with claim 6, Applicant notes that claim 8 has been amended to specify that "the plurality of FLASH memory chips comprises memory chips fabricated by different manufacturers." (A similar amendment has been made to claim 30.) Applicant respectfully submits that O'Neil does not disclose a plurality of FLASH memory chips comprising memory chips fabricated by different manufacturers as required by claim 8, and that claim 8 and claims dependent from claim 8 are further allowable for that additional reason.

With further regard to claim 11, the Office Action asserted that "Fig. 10, step 1224, 'Apply update instructions' and related text" disclosed "modifying contents of the at least one memory device without identifying actual details regarding a specific memory device, wherein the actual details may be selected from a group comprising memory device manufacturer, memory device type, memory size, memory model, and memory brand." Applicant notes that 1224 of O'Neil is not a step, but instead a section of memory component 1002. Regarding section 1224, O'Neil states:

> Thereafter, the update package 110 is transferred from its temporary location 112 to a section 1224 of the nonvolatile or flash memory component 1002 for more secure storage. Storage of the update package 110 in the nonvolatile memory provides a means for recovering from a power failure, device interruption, or reset operation without requiring retransmission of the update package 110 from the server. As before, one or more validation checks are used to insure that the image contained in the flash memory 1002 is a complete and error free copy of the desired update package 110.

O'Neil at p. 51. O'Neil also includes a state 1250 identified as "Apply Update Instructions." O'Neil describes state 1250 as follows:

> Proceeding to state 1250, the update agent 1025 applies the appropriate instructions to update the information contained in the copy of the first bank stored in the working bank 1232. As previously described, the instructions may address and copy information from other banks 1120

contained in the flash memory 1002 to obtain information sequences that are desirably used in generating the updated bank information for the working bank 1232. Additionally, other operations may be used to modify the code contained in the working bank to reflect the desired contents as determined by the update generator 102. In one aspect, banks that are determined not be [sic] have been changed between the first code version and the second code version do not require further processing and the update process may loop back to state 1240 where a new bank is copied an the process resumed using the corresponding instructions from the update package. Alternative, those banks which do not require updating are skipped in the previous step 1240 for the purpose of improving update efficiency. Again, numerous error detection measures may take place after the update instruction has been executed to verify that the update bank information is correct.

O'Neil at p. 53. Regardless of which of the section 1224 or state 1250 the Office Action intended to cite, Applicant respectfully submits that the cited portions do not disclose a method as claimed in claim 6 further comprising, *inter alia*, modifying contents of at least one of the plurality of memory devices without identifying actual details regarding a specific memory device, wherein the actual details may be selected from a group comprising memory device manufacturer, memory device type, memory size, memory model, and memory brand. As such, Applicant submits that claim 11 is further allowable for this reason.

Rejection of Claims Under 35 U.S.C. §103(a)

<u>Rejection of Claims 1-5, 10, and 32</u>

In the Office Action, claims 1-5, 10, and 32 were rejected under 35 U.S.C. §103(a) as being unpatentable over O'Neil in view of James S. Woodward, U.S. Patent No. 6,148,441 (hereinafter "Woodward"). Claim 1 is amended by the present response to recite, *inter alia*, a method of updating non-volatile memory in an electronic device, the non-volatile memory comprising a plurality of memory devices comprising a first memory device having a first associated type and a second memory device having a

second associated type, wherein the first associated type and second associated type are not the same, the method comprising, *inter alia*, selecting at least one of the plurality of memory devices from the plurality of memory devices to be updated using the update information, and identifying updating software corresponding to at least the associated type of at least one of the plurality of memory devices to be updated, and updating the at least one of the plurality of memory devices using the identified updating software and the update information.

The Office Action asserted that O'Neil disclosed "selecting one of the at least one memory device to be updated using the update information." Even assuming, *arguendo*, that O'Neil made such a disclosure, Applicant respectfully submits that O'Neil does not disclose <u>selecting at least one of the plurality of memory devices from the plurality of memory devices</u> to be updated using the update information as required by amended claim 1. Applicant further respectively submits that neither O'Neil nor Woodward, alone or in combination, teach, suggest, or otherwise render obvious a method including, *inter alia*, selecting at least one of the plurality of memory devices from the plurality of memory devices to be updated using the update information, and that they therefore do not render claim 1 or any claim that depends from claim 1 obvious.

Further, the Office Action recognized that "O'Neil does not explicitly disclose identifying the associated type of the memory devices." However, the Office Action asserted that Woodward disclosed a method for determining the type of flash memory being used, citing col. 8, lines 16-41. That portion of Woodward states as follows:

> As part of the installation procedure for the new Interrupt 15, and as shown in step 104, the CPU determines whether the flash ROM used in the PC system is an INTEL® device or an ADVANCED MICRO DEVICES® flash ROM. According to the preferred embodiment, the CPU performs this operation by checking if the flash ROM is a 5 volt device. If it is, the CPU considers it an AMD flash ROM device and continues on to step 108. If, conversely, the CPU decides that the flash ROM is not a 5 volt device, then the CPU

deems it to be a 12 volt INTEL® flash ROM and exits from the program in step 106.

In step 108, the CPU retrieves the "old" Interrupt 15 routine and saves it for the end of the "new" Interrupt 15 routine (i.e., the "old" routine is tacked onto the end of the "new" routine). The CPU in step 110 then sets the address for the Interrupt 15 in the interrupt vector table equal to the location of the "new" Interrupt 15, that preferably comprises the subroutine of FIG. 4B. In step 112, the CPU determines how much space the program of the present invention will occupy by subtracting the beginning address of the program from the end address. The CPU performs a TSR (terminate and stay resident) operation in step 114 and informs the operating system of the address of the "new" Interrupt 15 and the amount of space occupied by that routine, so that the operating system will not attempt to take that space in memory.

The Office Action asserted that because Woodward disclosed "a method for determining the type of flash memory being used" that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Woodward's method to identify the type of non-volatile memory in the O'Neil client device. Applicant respectfully traverses that conclusion for at least three reasons. First, Applicant respectfully submits that the cited portion of Woodward, alone or in combination with O'Neil, does not teach, suggest, or otherwise render obvious a method comprising, *inter alia*, selecting at least one of the plurality of memory devices from the plurality of memory devices to be updated using the update information, and identifying updating software corresponding to at least the associated type of at least one of the plurality of memory devices to be updated, and updating the at least one of the plurality of memory devices using the identified updating software and the update information. Second, Applicant respectfully submits that the proposed combination of the Office Action would not result in the claimed subject matter. Third, Applicant submits that Woodward in fact teaches away from the claimed subject matter.

Claim 1 relates to a method of updating non-volatile memory in an electronic device, the non-volatile memory comprising a plurality of memory devices comprising a

first memory device having a first associated type and a second memory device having a second associated type, wherein the first associated type and second associated type are not the same. Applicant submits that neither O'Neil nor Woodward teach, suggest, or otherwise render obvious updating such memory in a device having a plurality of memory devices comprising a first and second memory device having different associated types, let alone the method of claim 1. Claim 1 requires "identifying updating software corresponding at least the associated type of the at least one of plurality of memory devices to be updated," and also "selecting at least one of the plurality of memory devices from the plurality of memory devices." Because neither Woodward nor O'Neil disclose a plurality of memory devices, including a first and second memory device having different types, they do not teach or disclose selecting at least one of the plurality of memory devices from the plurality of memory devices, nor do they teach identifying updating software corresponding to at least the associated type of the at least one memory device to be updated.

Similarly, combining Woodward and O'Neil could not result in such a method because neither of them discloses selecting from a plurality of devices, where the plurality of devices comprises a first memory device having a first associated type and a second memory device having a second associated type, wherein the first associated type and second associated type are not the same. For example, the cited portion of Woodward describes a device wherein a CPU determines "whether the flash ROM used in the PC system is an INTEL® device or an ADVANCED MICRO DEVICES® flash ROM." (emphasis added). Thus, Woodward does not disclose selecting from among different memory devices in an electronic device, but rather relates to determining which single type of flash ROM is used in a System. Woodward discloses determining which flash is "used in the PC system," and not using different types in a system, let alone selecting from among different types.

In fact, Woodward teaches against such a combination, explicitly teaching that multiple flash ROM devices should not be used, let alone different types. For example, Woodward states, at col. 3, lines 17-21, "A first solution to this shortcoming of prior flash

ROM devices was to provide a separate flash ROM for storing the boot code. <u>One obvious disadvantage to this practice was that at least two flash ROMs were required</u> – one to store the boot code, and the other to store other program code and data." (emphasis added). In its "Summary of Invention" Woodward states, "In accordance with the preferred embodiment, the present invention determines whether a 5 volt or 12 volt flash ROM forms part of the system, and if a 5 volt flash ROM is used, provides additional steps, as part of a modified interrupt routine." Thus, Woodward teaches determining <u>whether</u> one or the other is present, not including different types or selecting from those types. In its "Description of the Preferred Embodiment Section," Woodward further states, "The present invention is designed for use in a PC system implementing flash ROM devices in which, <u>unlike the Intel flash ROM</u>, the EISA configuration code is stored in the same sector of the flash ROM as other programs, such as boot code, Ediags code, or some other code which it is desirable to maintain and preserve separate from EISA configuration code." (Woodward at col. 6, lines 19-25; emphasis added). Thus, again, Woodward teaches away from using a plurality of memory devices having different associated types. This teaching away is even more predominant with respect to, for example, claims 8 and 10 (dependent from claim 6), which further relates to FLASH memory chips fabricated by different manufacturers.

As a result of the foregoing, Applicant respectfully submits that claim 1, and all claims that depend from claim 1, are not rendered obvious by the cited art. Further, because claim 6 recites, *inter alia,* a method of updating non-volatile memory, the non-volatile memory comprising a plurality of memory devices comprising a first memory device having a first associated type and a second memory device having a second associated type, wherein the first associated type and second associated type are not the same, the method comprising, *inter alia,* employing an update agent to interact with a memory library and the plurality of memory devices and to identify updating software corresponding to at least an associated type of at least one of the plurality of memory devices, Applicant also submits that claim 6, and all claims that depend from claim 6, are not rendered obvious by the cited art.

Rejection of Claims 25-27, 46-49, and 51-52

The Office Action rejected claims 25-27, 46-49, and 51-52 under 35 U.S.C. §103(a) as being unpatentable over O'Neil in view of Gove *et al.*, U.S. Patent No. 5,471,592 (hereinafter "Gove"). As an initial matter, Applicant respectfully submits that these claims are allowable for at least the reasons discussed above. For example, amended claim 49 recites a mobile handset comprising, *inter alia*, a plurality of flash memory chips comprising a first flash memory chip having a first associated type and a second flash memory chip having a second associated type, wherein the first associated type and second associated type are not the same. The remaining claims are allowable at least because they depend from allowable claims and are therefore allowable for at least the same reasons.

With further regard for example, to claim 51, Applicant notes that that claim recites a mobile handset comprising, *inter alia*, wherein each of the processors is adapted to manipulating a specific subset of the plurality of flash memory chips. Gove, however, teaches away from such a combination. For example, Gove states, "In essence, in some of the prior art, the data must be moved from memory to memory for access by the various processors, which in the instant system the data can remain constant in the memory while the processors are switched as necessary between the memories." (Gove at col. 9, lines 9-15). Thus, Gove teaches that processors should be switched between memories, in contrast to being adapted to manipulate a specific subset of memories. Gove would also thus teach away from, for example, claim 25.

Rejection of Claim 50

The Office Action rejected claim 50 under 35 U.S.C. §103(a) as being unpatentable over O'Neil in view of Gove in further view of Woodward. Claim 50 depends from claim 49. Applicant submits that claim 50 is allowable for at least the reasons discussed above with reference to claims 1, 6, and 49.

Rejection of Claims 28-31 and 33-45

The Office Action rejected claims 28-31 and 33-45 under 35 U.S.C. §103(a) as being unpatentable over O'Neil for similar reasons as claims 6-9 and 11-24. Claim 28 is amended by the present response similar to the discussion regarding claim 6. Applicant therefore respectfully submits that claims 28-31 and 33-45 are allowable at least for the reasons discussed above, for example, with respect to claim 6.

Conclusion

In general, the Office Action makes various statements regarding claims 1-52 and the cited references that are now moot in light of the above. Thus, Applicant will not address such statements at the present time. However, the Applicant expressly reserves the right to challenge such statements in the future should the need arise (e.g., if such statements should become relevant by appearing in a rejection of any current or future claim).

The Applicant believes that all of claims 1-52 are in condition for allowance. Should the Examiner disagree or have any questions regarding this submission, the Applicant invites the Examiner to contact the undersigned at (312) 775-8000 for an interview.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

Date: _____June 3, 2008_____   _____/Kevin E. Borg/_____
                                                                Kevin E. Borg
                                                                Reg. No. 51,486

Hewlett-Packard Company
Intellectual Property Administration
Legal Department, M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400